

# Luchao Sun

## List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Preparation, microstructures, and mechanical properties of directionally solidified $\text{Al}_2\text{O}_3/\text{Lu}_3\text{Al}_5\text{O}_{12}$ eutectic ceramics. International Journal of Applied Ceramic Technology, 2022, 19, 695-702.	2.1	3
2	Synthesis of non-agglomerating submicron/nano $\text{Yb}_2\text{Si}_2\text{O}_7$ powders by a carbon-coated coprecipitation method. Journal of the American Ceramic Society, 2022, 105, 5548-5554.	3.8	3
3	Unique chemical activity in porous $\text{Yb}_2\text{C}_2$ ceramics with high porosity and high compressive strength. Scientific Reports, 2020, 10, 20227.	3.3	1
4	Mechanical and thermal properties of light weight boron-mullite $\text{Al}_5\text{BO}_9$ . Journal of the American Ceramic Society, 2020, 103, 5939-5951.	3.8	11
5	A multicomponent $\hat{\text{I}}^3$ -type $(\text{Gd}_{1/6}\text{Tb}_{1/6}\text{Dy}_{1/6}\text{Tm}_{1/6}\text{Yb}_{1/6}\text{Lu}_{1/6})_2\text{Si}_2\text{O}_7$ disilicate with outstanding thermal stability. Materials Research Letters, 2020, 8, 424-430.	3.7	4
6	Tunable properties of $(\text{HoxY}_{1-x})_2\text{SiO}_5$ as damage self-monitoring environmental/thermal barrier coating candidates. Scientific Reports, 2019, 9, 415.	3.3	16
7	Robust hydrophobicity and evaporation inertness of rare-earth monosilicates in hot steam at very high temperature. Journal of the American Ceramic Society, 2019, 102, 3076-3080.	3.8	30
8	Mechanisms of ultralow and anisotropic thermal expansion in cordierite $\text{Mg}_2\text{Al}_4\text{Si}_5\text{O}_{18}$ : Insight from phonon behaviors. Journal of the American Ceramic Society, 2018, 101, 4708-4718.	3.8	9
9	Effect of interfacial energy on microstructure of a directionally solidified $\text{Al}_2\text{O}_3/\text{YAG}$ eutectic ceramic. Journal of the American Ceramic Society, 2018, 101, 1021-1035.	3.8	19
10	Pressure-induced low-lying phonon modes softening and enhanced thermal resistance in $\text{Mg}_2\text{Al}_4\text{Si}_5\text{O}_{18}$ . Journal of the American Ceramic Society, 2018, 101, 4708-4718.	3.2	5
11	Theoretical Study on the Relationship Between Crystal Chemistry and Properties of Quaternary $\text{Y}_4\text{Si}_4\text{O}_{20}\text{N}_4$ Oxynitrides. Journal of the American Ceramic Society, 2016, 99, 2442-2450.	3.8	16
12	New MAX-phase Compounds in $\text{Ti}_5\text{Al}_8\text{Ti}_3\text{Al}_4\text{AlC}$ System. Journal of the American Ceramic Society, 2014, 97, 67-69.	3.8	120
13	Investigation of Native Point Defects and Nonstoichiometry Mechanisms of Two Yttrium Silicates by First-Principles Calculations. Journal of the American Ceramic Society, 2013, 96, 3304-3311.	3.8	26
14	Reaction Synthesis and Mechanical Properties of $\text{Lu}_4\text{Si}_2\text{O}_7$ . Journal of the American Ceramic Society, 2013, 96, 2264-2268.	3.8	1
15	A New Oxynitride with Low Thermal Conductivity. Journal of the American Ceramic Society, 2012, 95, 3278-3284.	3.8	23
16	Mechanism of Intrinsic Point Defects and Oxygen Diffusion in Yttrium Aluminum Garnet: First-Principles Investigation. Journal of the American Ceramic Society, 2012, 95, 3628-3633.	3.8	32
17	Crystal structure determination of nanolaminated $\text{Ti}_5\text{Al}_2\text{C}_3$ by combined techniques of XRPD, TEM and ab initio calculations. Journal of Advanced Ceramics, 2012, 1, 268-273.	17.4	18
18	Effect of Ti Dopant on the Mechanical Properties and Oxidation Behavior of $\text{Zr}_2[\text{Al}(\text{Si})_4\text{C}_5]$ Ceramics. Journal of the American Ceramic Society, 2011, 94, 1872-1877.	3.8	12